

**ABSTRACT OF THE DISCLOSURE**

The present invention provides a method and an apparatus for reducing noise. The apparatus includes a phase detector adapted to determine a phase difference between a first and a second signal, a first circuit adapted to generate a control signal based upon the determined phase difference, and a second circuit. The second circuit is adapted to receive a third signal, receive a fourth signal, modify the fourth signal based upon the control signal, and provide the third signal and the modified fourth signal to the phase detector as the first and second signals.